

### Abstract of the Invention

A barrier layer which protects the surface of a substrate from exposure to ambient conditions, including humidity, salt, corrosive substances, and the like, comprises a composition of a first layer of a parylene polymer over a surface portion  
5 of the substrate, a second transition layer of a mixture of the first parylene polymer and a second parylene polymer on the first layer, and a third layer of only the second parylene polymer. The second layer may be a graded layer, and the first and second parylene polymers may be selected from the group of parylene C, D, and N. An adhesion promoting layer may be between the surface of the substrate and the first  
10 layer.